

# Treasury Debt Management



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# Treasury Inflation-Protection Securities

## Treasury's Perspective

- Widen investor base
- Reduce/eliminate term premium

## Investor's Perspective

- Improve portfolio diversification
- Protect against inflation better than real estate, commodities, or other real assets

# TIPS Structure

- The principal value is adjusted for inflation by multiplying the value at issuance by an index ratio that changes daily. The inflation accrual on principal is paid at maturity.
- The coupon payments are a fixed percentage, determined at auction, of the inflation-adjusted value of the principal.
- The principal repayment at maturity is protected against deflation, but the semi-annual coupon payments are not protected against deflation.
- The inflation accrual is based on the CPI-U NSA with a 3-month lag (e.g., index number for July 1<sup>st</sup> is based on the April CPI report which was released in mid-May).
- Daily indexed numbers are calculated using straight-line interpolation between first-of-month numbers.
- The index ratio for a particular valuation date is the index number for that date divided by the index number for the dated date.
- $$\text{Index Ratio}_{\text{Value Date}} = \frac{\text{Index number for value date}}{\text{Index number for dated date}}$$

# TIPS Auction Schedule

## July 2004

- 10-yr TIPS, auction 7/8/04, settle 7/15/04, mature 7/15/14
- 20½-yr TIPS, auction 7/27/04, settle 7/30/04, mature 1/15/25

## October 2004

- 9¾-yr TIPS, auction 10/7/04, settle 10/15/04, mature 7/15/14
- 5½-yr TIPS, auction 10/26/04, settle 10/29/04, mature 4/15/10

## January 2005

- 10-yr TIPS, auction 1<sup>st</sup> half of month, settle on 15<sup>th</sup>, mature 1/15/15
- 20-yr TIPS, auction 2<sup>nd</sup> half of month, settle last business day of month, mature 1/15/25

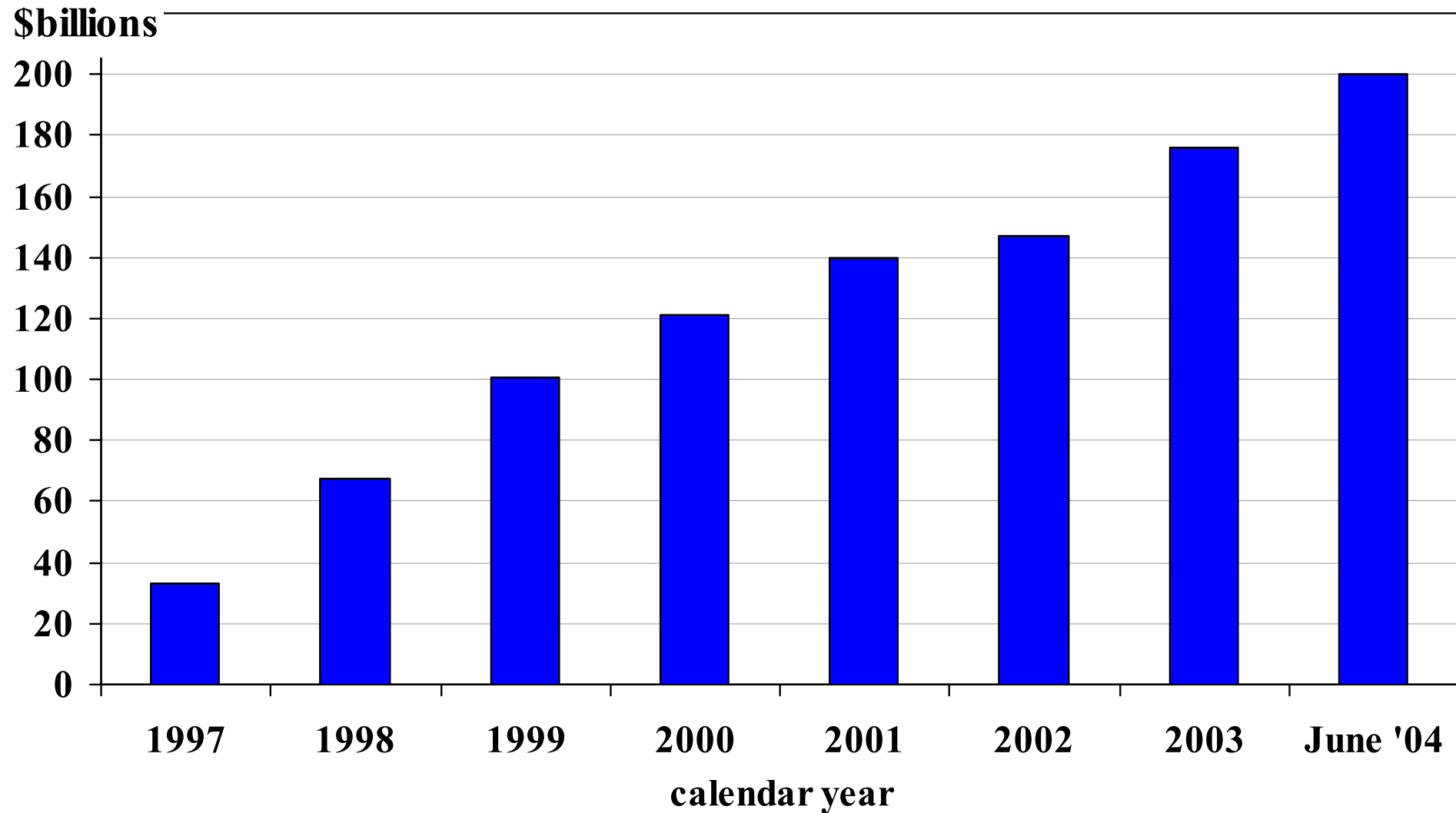
## April 2005

- 9¾-yr TIPS, auction 1<sup>st</sup> half of month, settle on 15<sup>th</sup>, mature 1/15/15
- 5-yr TIPS, auction 2<sup>nd</sup> half of month, settle last business day of month, mature 4/15/10

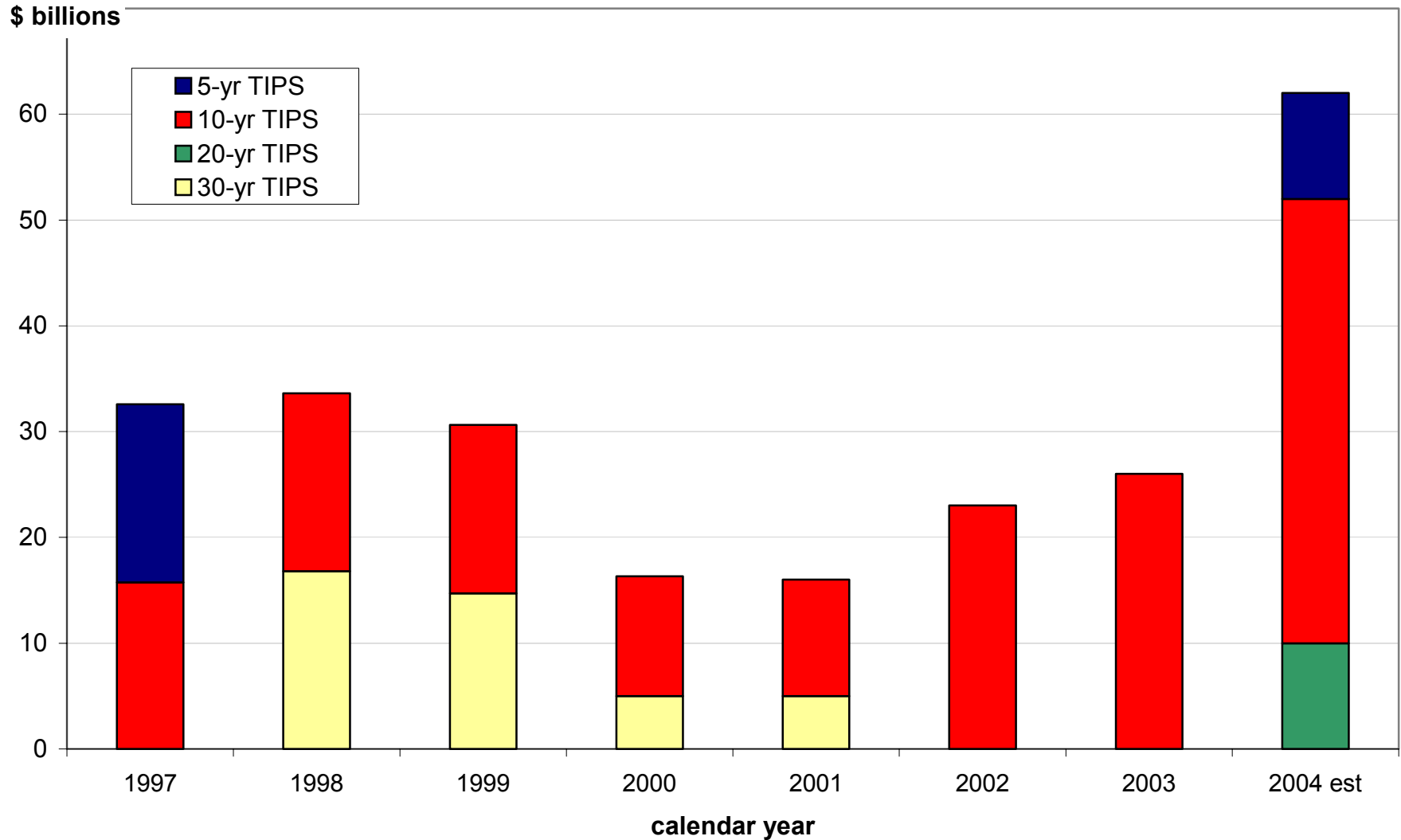
\* Tentative Schedule

# TIPS Supply

Inflation-Adjusted Par Amount Outstanding

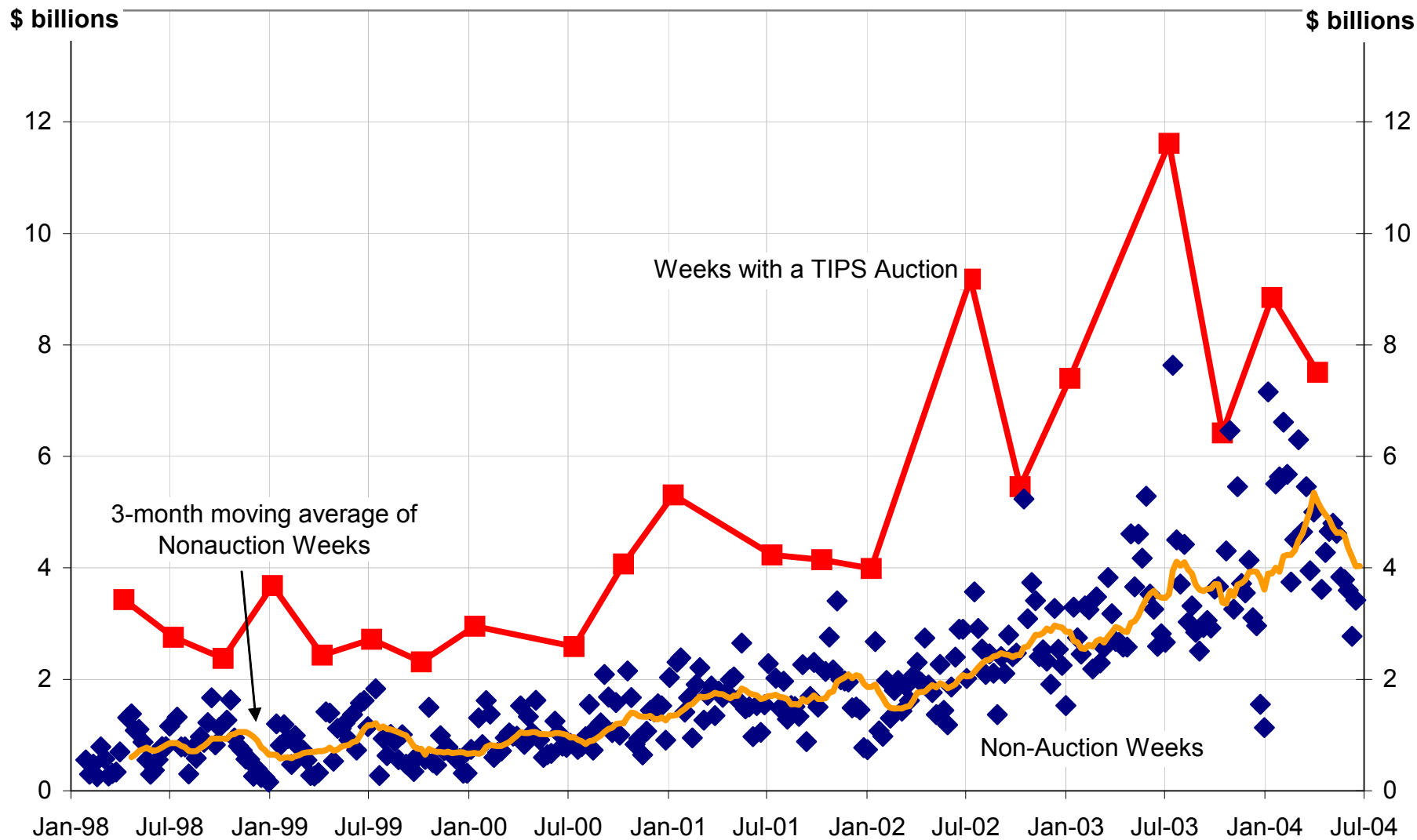


# TIPS Annual Issuance



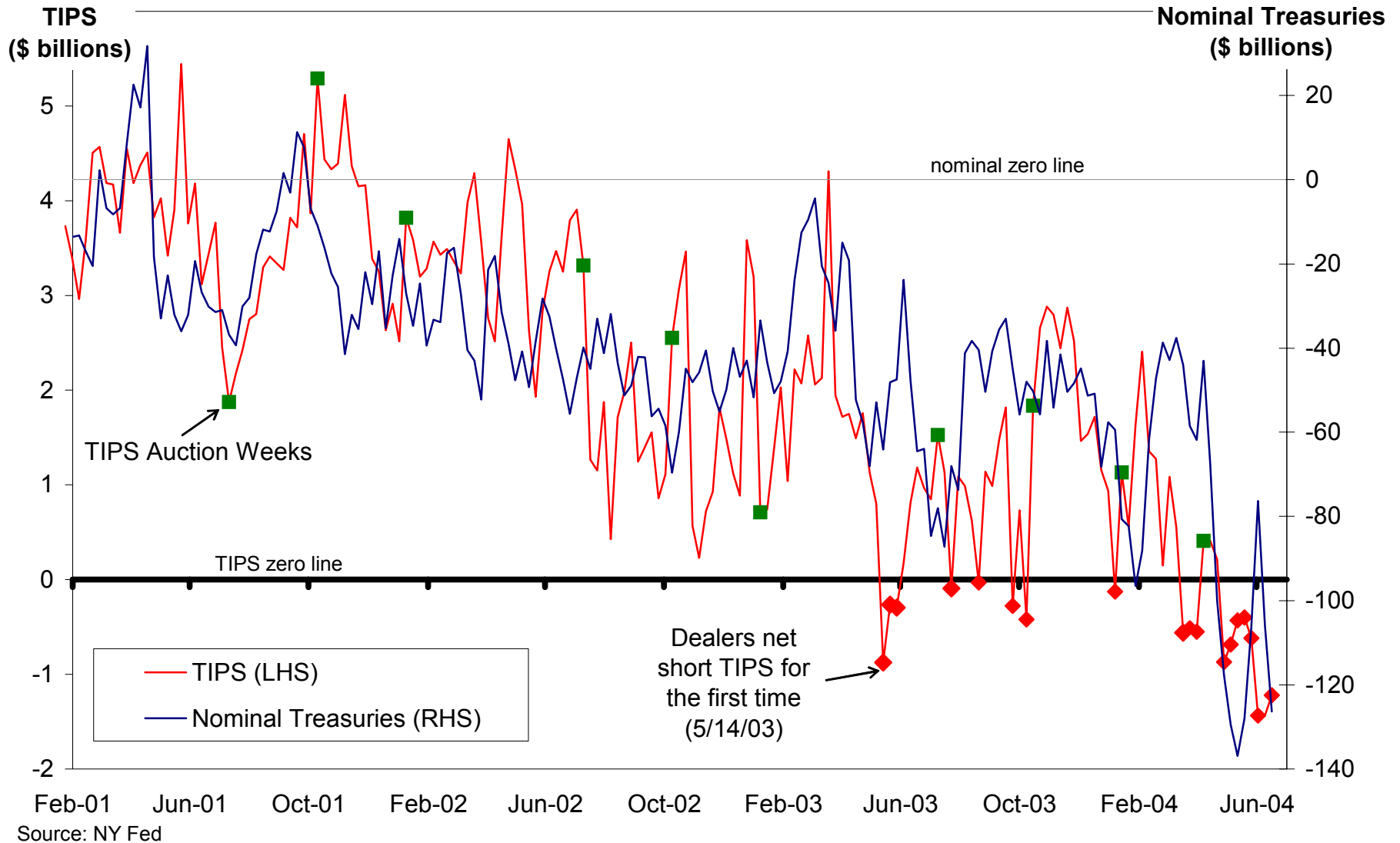
\* 2004 issuance amounts are tentative and not necessarily indicative of future auction sizes.

# Average Daily TIPS Transactions by Primary Dealers



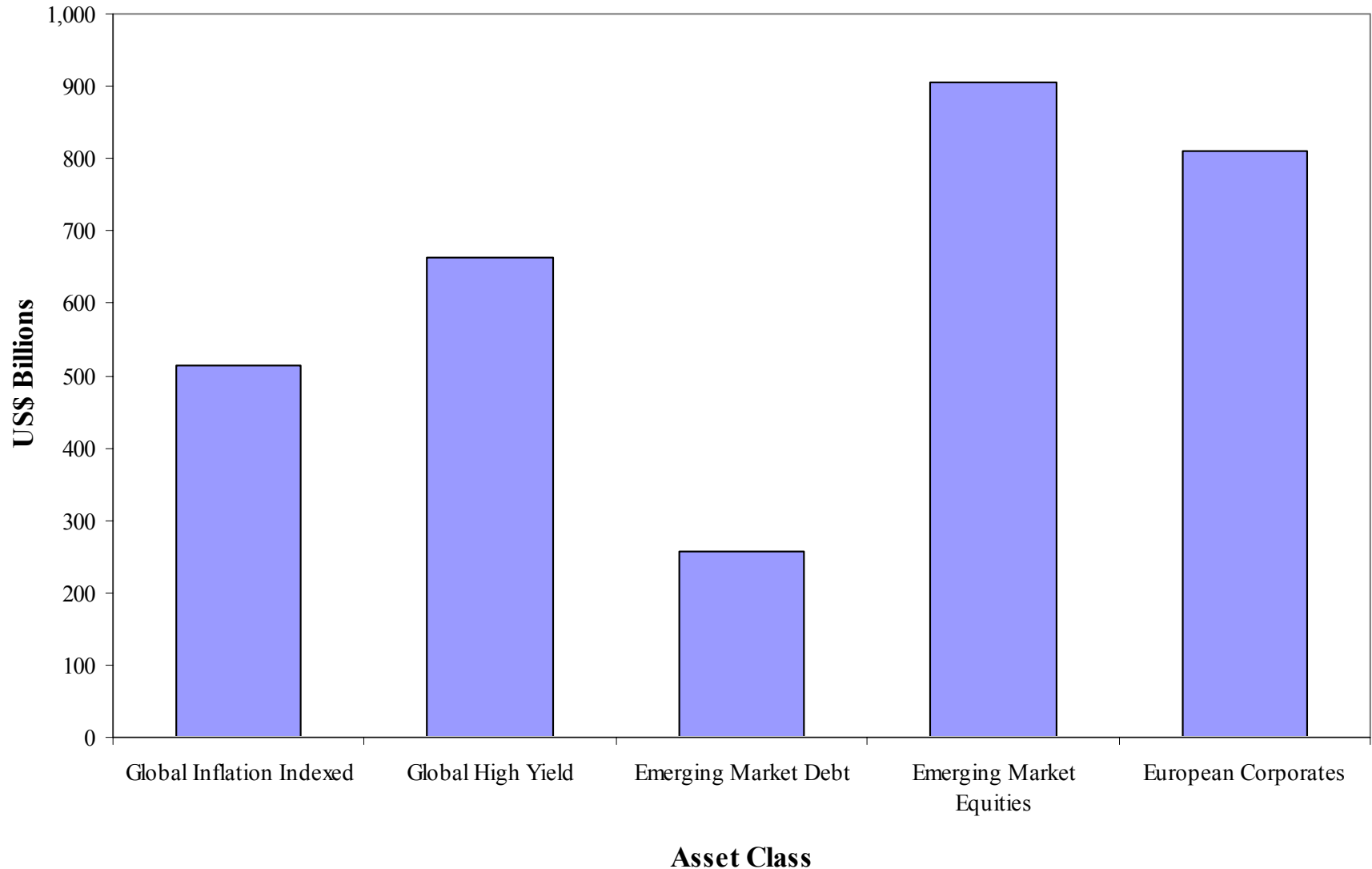
Source: NY Fed

# Net Dealer Positions in Treasuries





# SIZE OF GLOBAL INFLATION-INDEXED BOND MARKET VS. OTHER ASSET CLASSES

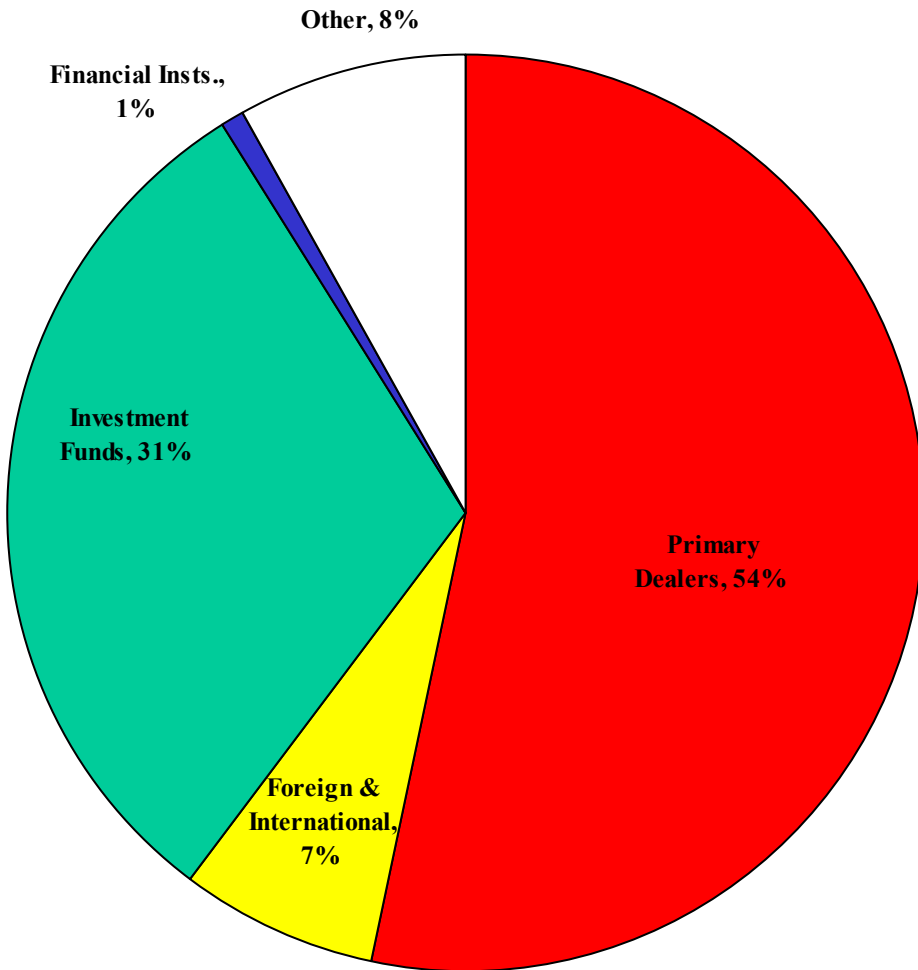


Source: Bridgewater Associates

# Distribution of Competitive Auction Awards of 10-Year Treasury Notes

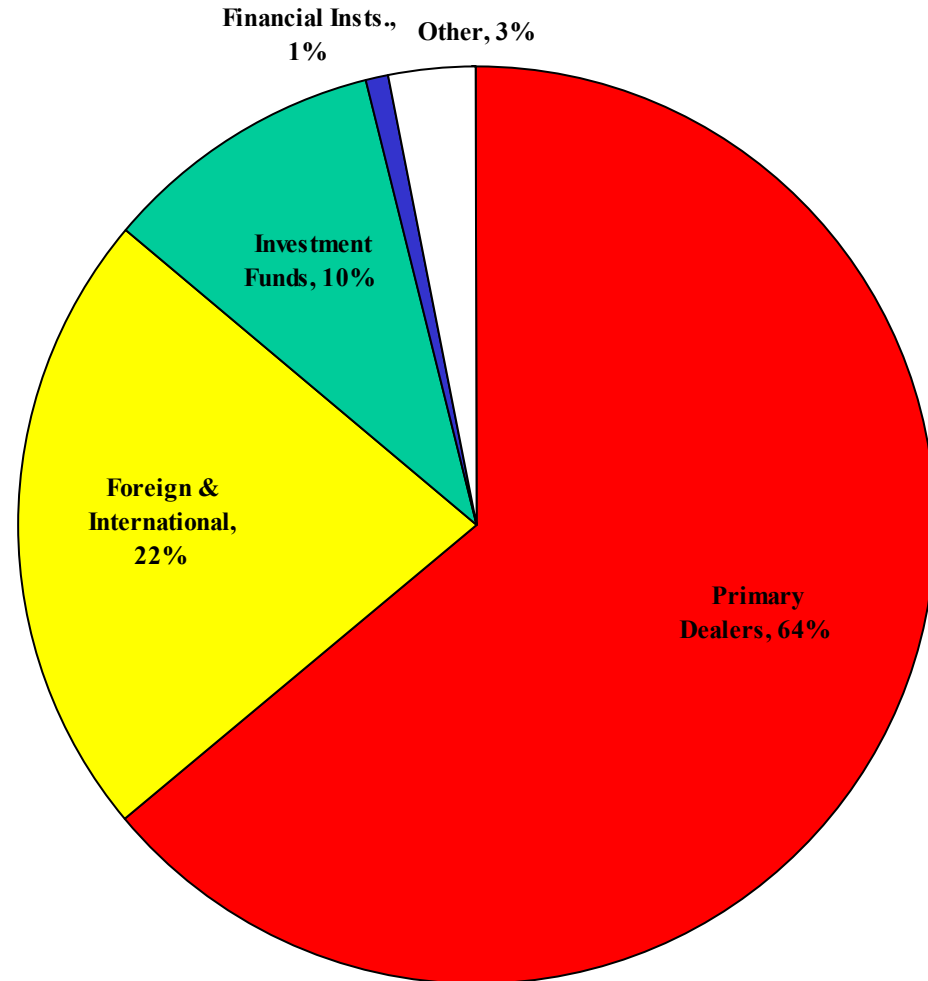
## 10-Year TIPS

July '03, Oct '03, Jan '04, & Apr '04



## 10-Year Nominal Notes

Nov '03, Dec '03, Feb '04, & Mar '04



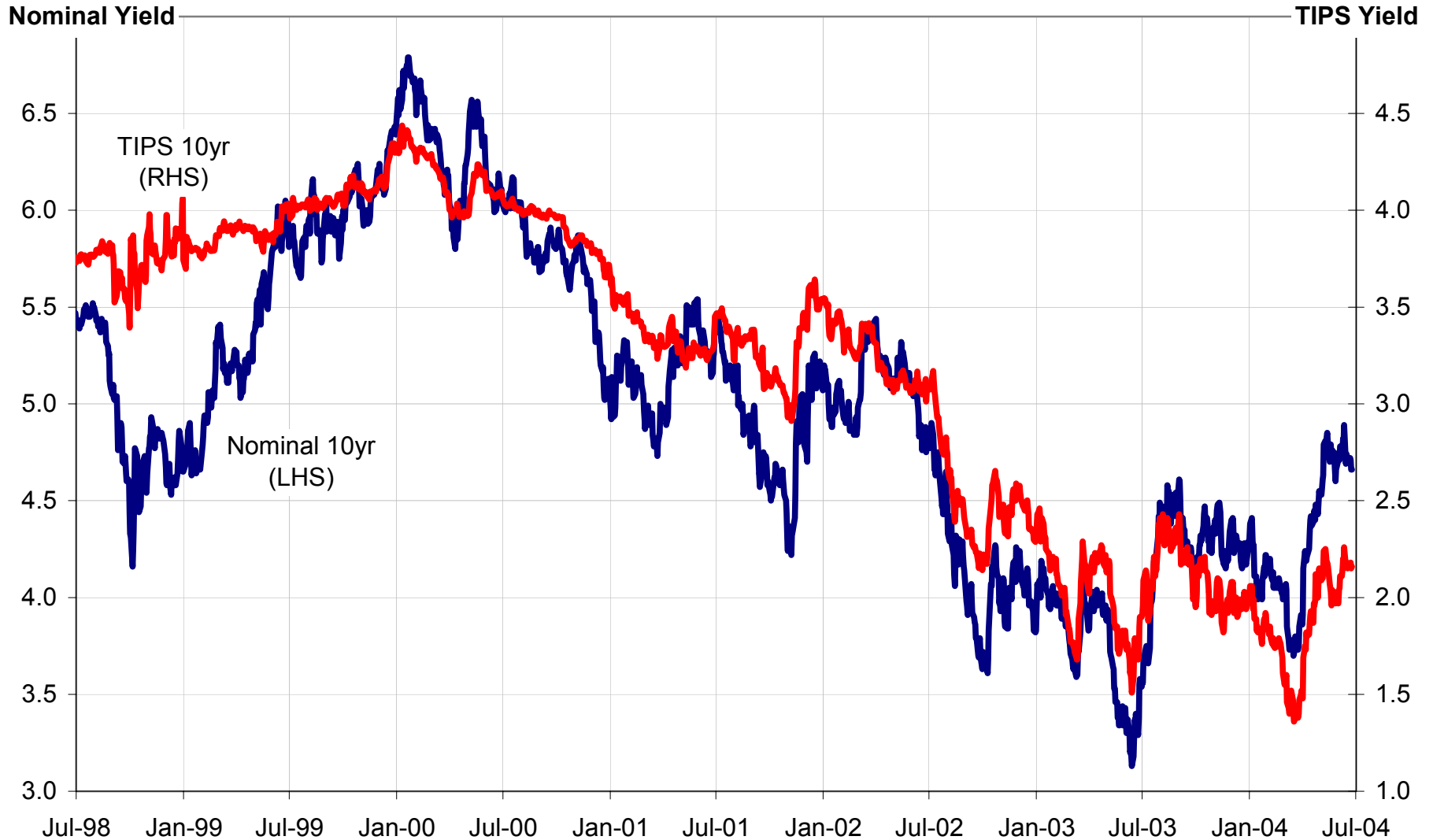
# I/I BOND CORRELATION TO OTHER ASSETS AND INFLATION

## Correlation of TIPS (10-Year Duration) to...

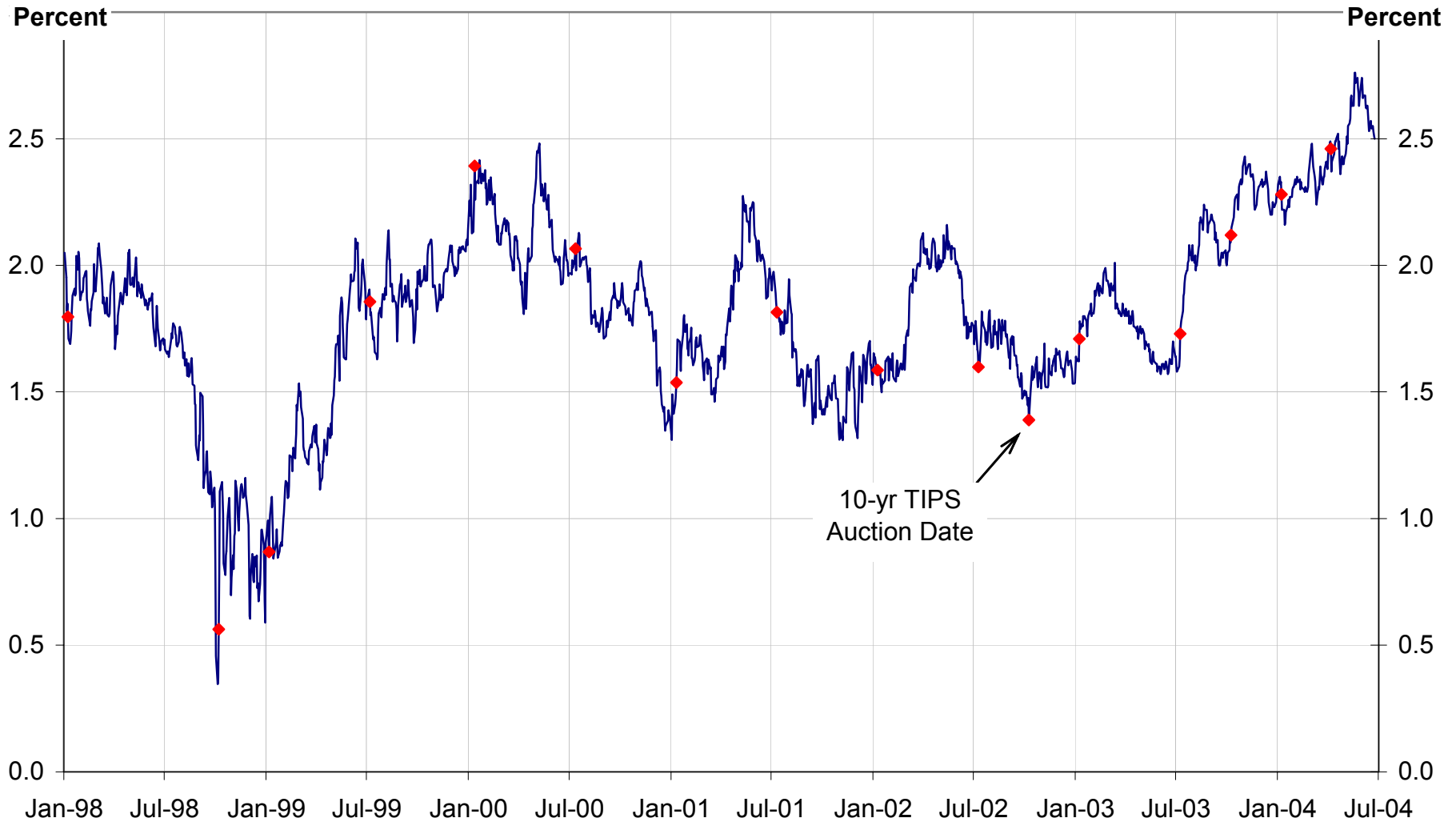
<i>Jan. 1970 - Feb. 2004</i>	US CPI	US Equities S&P 500	US Nominal Bonds 10-Year Duration
<b>1 Month</b>	0.18	0.09	0.60
<b>3 Month</b>	0.28	0.02	0.67
<b>1 Year</b>	0.49	-0.21	0.30
<b>3 Year</b>	0.65	-0.54	-0.27
<b>5 Year</b>	0.75	-0.56	-0.28

Source: Bridgewater Associates

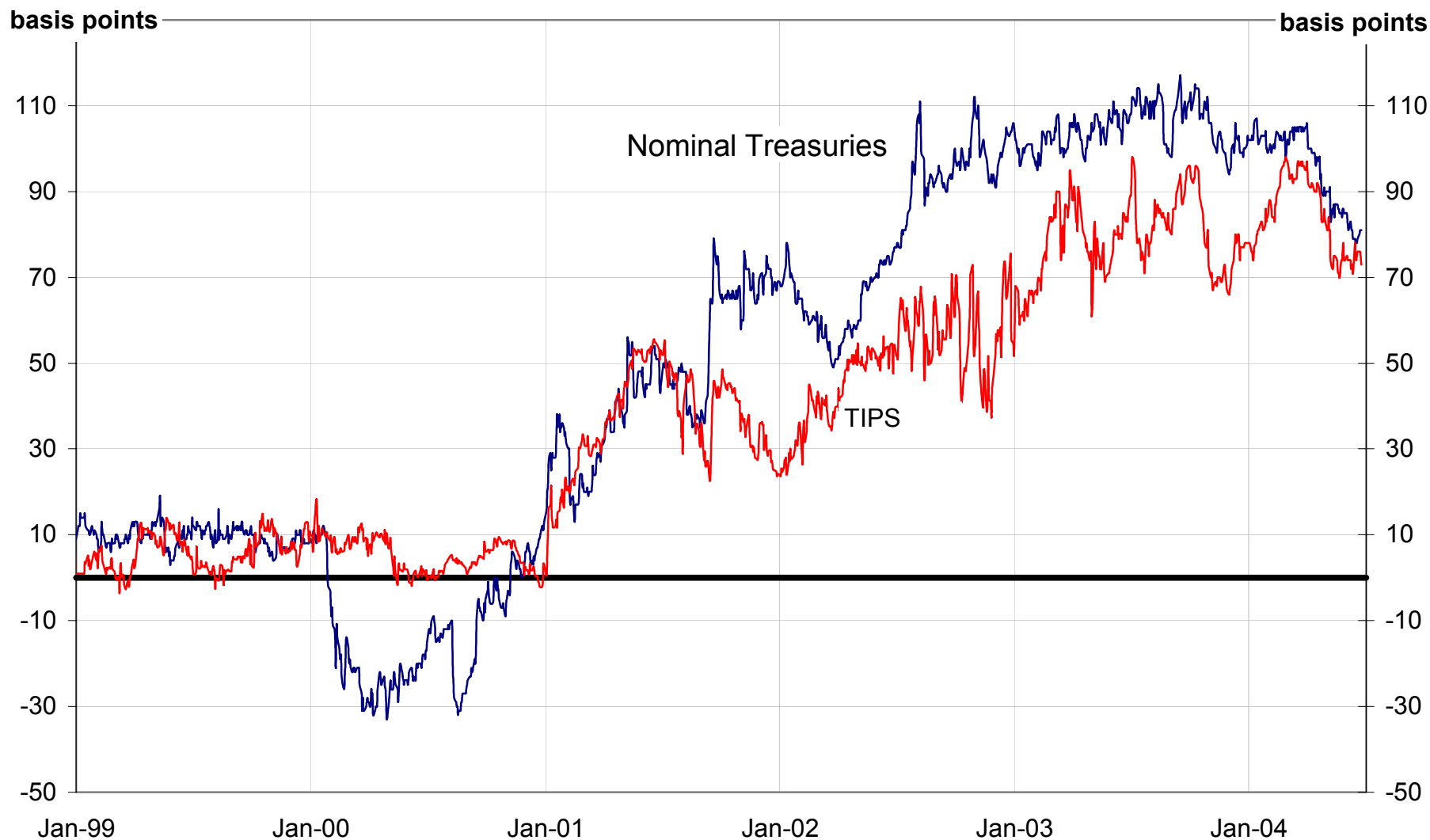
# 10-Year TIPS and Nominal Yields



# 10-yr TIPS Breakeven Inflation



# 5yr - 10yr Yield Spread



# Monthly Inflation Accrual on TIPS

